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ABSTRACT

The first non-commercial cable television (CATV) project in Sweden was conducted in Kiruna since it was the site of an established commercial CATV network. The Kiruna project goal was to emphasize locally produced programs. Objectives tested were production and planning forms, cooperation between groups, and utilization of a program bank. Evaluation of the first trial period indicated that 90 percent of the people interviewed wanted the experiment to continue. The trial period was too brief to provide satisfactory assessment, so funds were all cated for continuation. Evaluation again indicated success, especi lly in programing. The Committee for Television and Radio in Educ tion (TRU) determined that CATV as used in Kiruna should be regarded as an independent medium which is not to be isolated from other media and methods. Statistical tables show the viewer age, level of education, percentage of viewer opinion, and comparative figures. (Author/DS)

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Kabelvision Kiruna

CATV – experimental application of a new channel in a neighbourhood society

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Extract from the report A Programme for Sound and Pictures in Education by The Commission for Radio and Television in Education (the TRU-Committee)

Statens Offentliga Utredningar
(Government Official Reports)
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Stockholm, May 1975

- The TRU Committee is a Swedish government committee, subordinate to the Ministry of Education, appointed in 1967. It will present its final report in the spring of 1975. Its task is to examine the forms for producing aids involving the use of radio and television.
- TRU produces and broadcasts educational programmes in the fields of pre-school and adult education on the national TV network and produces teaching aids for internal use.
- TRU has professional equipment for the production of radio programmes sound tapes, and TV programmes/videotapes in colour and in black and white.
- TRU also tests other forms of distribution such as CATV and videograms.

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1 Introduction

Kabelvision Kiruna is the name given to an experiment with CATV broadcasts, conducted in the spring of 1974 and continued in the winter 1974/75. It is the first non-commercial CATV project in Sweden.

Kiruna lies in the far north of Sweden, about 150 kilometres north of the Arctic Circle. In terms of surface area it is one of the largest cities in the world, but it has only 30,000 inhabitants, three quarters of whom live in the city centre. The government-owned LKAB mining company provides the municipality's main industry. Some 50 % of the city's population is directly or indirectly employed by LKAB.

One reason for selecting Kiruna as the site of the CATV experiment was that the city already had one the most extensive CATV nets in the country. This net is owned by LKAB and was installed because of unsatisfactory TV reception. For the period of the experiment LKAB gave Kabelvision Kiruna the right to utilize one of the CATV channels.

The experiment was backed by three principals – TRU (the Committee for Television and Radio in Education), the Swedish Broadcasting Corporation (which holds exclusive rights to TV broadcasts in Sweden), and the Kiruna local authorities.

The emphasis was on locally produced programmes. Equipment was relatively simple, staff was minimal, and in the later trials several programmes were produced by local residents, who had been taught production and programme rules at a weekend course.

Evaluation of the first trial period (Jan 24 – May 16 1974) indicates i. a. that close on 90 % of those interviewed wanted the experiment to be continued. The CATV programmes attracted viewers primarily from groups who would otherwise have watched entertainment programmes on the Swedish Broadcasting Corporation's (SR) national network, or would not have watched TV at all. To a large extent the programmes interested people with a brief education who are otherwise difficult to reach with social information. The big advantage of the programmes was felt to be that Kabelvision brought up questions of local interest and that Kiruna residents were asked to participate in the programmes.

Preliminary results of the evaluation of the second trial period indicate that the general public appreciated programmes too. Technical faults and mistakes in programmes were felt to be more of an advantage than a disadvantage, since they emphasized the spontaneous character and

closeness to the viewers that the programmes provided. Audience polls indicate somewhat lower but more constant viewing figures compared to the first trial period. The limitations of the field and the short trial period were the main disadvantages. The continued experiment has confirmed that good production results can be achieved even with limited technical, economic, and personnel resources.

The TRU Committee has, on the basis of the two trial periods, reached the general conclusion that CATV as it was used in Kiruna should be regarded as an independent medium vis-à-vis ordinary TV. CATV is neither a pure extension nor a miniature version of national TV. It should primarily be utilized for those tasks which national TV cannot carry out, namely to reach specific groups rather than a general public, to emphasize local connection, and on the basis of local perspectives try to create understanding for general problems.

CATV should above all be made available to those who do not have access to other means of expression. It should be used in education in a broad sense, and to provide opportunity for an extended debate on society, consumption etc.

Finally, the Committee feels that it would valuable if an experiment more comprehensive in terms of time, scope and content were to be conducted on the basis of i. a. the experience obtained in the Kiruna experiment.

2 CATV Overseas

The history of CATV started about 25 years ago, probably in the Appalachians in the United States, where because of *geographical* conditions it was difficult to receive signals. An antenna located atop a mountain received the signals and passed them on via cables to the viewers. This central aerial system provided TV pictures of a very high quality.

The next stage was to set up a transmitter, which by being linked to the CATV net permitted direct transmission of own or taped programmes. CATV, however, also provides a number of other possibilities. By means of a computer system linked to the cable system, a subscriber can receive and provide information. By means of home terminals e. g. in the form of sets of buttons providing various alternatives, cable subscribers can participate in voting. In other words CATV offers the possibility of 2-way communication. Capacity increases the "wider" the cables are. In many parts of the world today cables containing 20 channels are being laid, but it should soon be technically possible to use 60 channel cables.

A Japanese research project involving an "experimental city" of 300 families is directed towards providing these families with the chance of testing which services and communications 2-way CATV can provide. This experiment is being conducted between 1972 and 1978, with the participation of the biggest Japanese electronics companies. A similar project involving 2 000 people is being conducted in Tama, a Tokyo suburb. This experiment will be concluded in 1976 and involves i. a. facsimile printed newspapers. In Irwing, Texas, an experiment designated TOCOM (Total Communication) is being conducted. According to information the CATV system contains 26 channels and home terminals which make it possible to register viewing frequency, take up individual programme orders, receive information from databanks etc.

In various parts of the world a number of surveys of the future of CATV have been carried out. One of the best known is the one made by the Sloan Commission on Cable Communication in the United States in 1971. According to the survey 5 770 communities in the United States were served by 3 100 cable systems. This means that 8.1 million subscribers or 12.5 % of American households were served by cable systems. Since 1972 all US cable systems are fitted with reconnection

capacity. The Commission recommended certain restrictions with regard to ownership in order to prevent national TV companies and newspapers from acquiring a dominating influence over CATV. The Commission also recommended that the cable stations provide a channel for "public acess", i. e. that in principle anyone could say anything on the net at no cost and with the help of the cable station's personell and equipment.

At present, however, most American cable channels are used to re-broadcast the big TV networks' programmes, and only to a lesser extent for local production.

In Canada some 30 % of all households, or about 2 million subscribers, are linked with some CATV system. There are circa 350 CATV systems, many of them owned by associations. These systems usually contain 10 but in some cases 20 channels. The Canadian Radio-Television Commission has issued certain recommendations and regulations. Thus the CATV stations have been recommended to open, in consultation with the Provincial Governments, one or more channels for educational use. The introduction of "Community channels" for local information, debate and entertainment. Advertizing will not be permitted in these channels and authorities and newspapers should not be permitted to wield any influence over programme work. At present more than 100 stations run community channels.

In Central Europe CATV is primarily used for the further distribution of neighbouring countries' TV programmes, although trials involving local TV have been conducted in serveral places. In the UK experimental work involving the use of CATV in five places will be carried out until 1979. The programmes will be local and non-commercial. The experiment is being conducted by private companies. In Finland the government has put forward a proposal in the Finnish parliament whereby CATV activities would be regulated. Under the terms of the proposal advertizing revenue would not be permitted to exceed a third of the CATV station's turnover. A programme council of 21 members from the political parties will be appointed to report violations to the government, which would then have the power to withdraw the station's licence.

An outline of CATV overseas must of necessity be very brief. In chapter 5 an attempt is made to compare and analyze the experiment in Kiruna in relation to what is happening internationally.

3 The Kiruna CATV experiment

Kiruna boasts one of Sweden's largest CATV nets. The facility which was installed in connection with the opening of SR's second TV channel, also permits viewers to take in Finnish programmes.

In November 1972 the municipality of Kiruna appointed a CATV committee to investigate the prerequisites for an experimental introduction of CATV. The municipality and TRU contacted each other to discuss the prerequisites for a joint experiment. The municipality was interested in trying CATV out for the distribution of educational programmes for adults, local consumer information, and municipal information. The Committee in its turn found it important to participate in the experiment in view of the directives issued to TRU II. The Press Commission was contacted in March 1973. Under the terms of its directives this Commission was to consider what new media techniques would mean to the future mass media market. The Press Commission therefore wished to take part in the experiment.

Under the terms of the Radio Act "a radio or wire transmission intended to be received directly by the general public, unless such transmission is intended solely for a closed circle the members of which are united by a definite affinity other than a joint interest in listening to or viewing the said transmission" is to be considered as being a radio broadcast. Under the terms of this regulation, CATV broadcasts comprise part of SR's[1] exclusive rights. In view of this contact was made with SR in order to discuss the matter. Since SR also proved to be interested in participating in the experiment, TRU, SR and the municipality of Kiruna agreed to jointly conduct a CATV experiment in Kiruna in the spring of 1974. The Press Commission also took part in these discussions but it was at that stage unclear whether the Press Commission would have any opportunity of participating in the experiment. (In early November it became clear that the Press Commission could not participate). In May the Committee requested funds for the experiment in its proposals for a production plan for the fiscal year 1973/74, where the reasons for the CATV experiment were presented. In September 1973 the Committee was informed that the production plan had been approved. In mid-October 1973 the Kabelvision Kiruna board was appointed. It comprised two representatives of the municipality of Kiruna, one SR and one TRU representative, with one of the Kiruna representatives as chairman.

[1] SR= Sveriges Radio (the Swedish Broadcasting Company).

3.1 The object of the experiment

The three parties agreed on the following objectives:

- to test various production and planning forms, reconnection and utilization forms in the use of a CATV net together with the population of a CATV area, local institutions and organizations,
- to test in this context how the co-operation between the principals, board, production group, programme conferences, work groups and organizations, and the inhabitants of the housing area functions with regard to how the Radio Act, the agreement with the State, and the broadcasting liability law can be applied to CATV activities of this sort,
- to utilize in various ways in local production programmes already produced by TRU and SR i. a. by setting up and using a programme bank,
- to test the function of available technical equipment for production, reconnection and distribution,

3.2 The extent of the CATV net

The CATV experiment in Kiruna – Kabelvision Kiruna – was initially intended to cover only the so-called Bolag area, a housing area in central Kiruna where most of the working population is employed by LKAB. The CATV net in this housing area covers some 1 200 households. The board of Kabelvision Kiruna decided that the neighbouring areas of Björkplan and Tallplan in the Lombolo area, two relatively recently built housing areas with a cable network covering circa 500 households, would be connected to the Bolag area's cable system. The experiment therefore covered about 1 700 households in Kiruna.

A number of institutions and schools were or became linked to the cable system – library, recreation centre, hospital, Hjalmar Lundbom Scool, Bolagsskolan, Triangelskolan, Lomboloskolan, and the Gröna Villan, Gruvfogdegatan and Lombolo nursery schools.

3.3 Technical production equipment

Kabelvision had at its disposal a house located on Trädgårdsgatan. After some rebuilding the groundfloor was used for studios and work room, while the upper storey provided work rooms and accommodation for some of the production group.

The station's technical equipment was borrowed from TRU and SR, was rented from various private companies, and was, to a certain extent, purchased new. The equipment comprised four black and white vidicon cameras of a semi-professional type, of which two were placed in the studio and two in the control room. One of these control room cameras

was used as a display camera and to provide a test picture. The control room also housed the camera control unit, picture and sound mixer, light variator for the spotlights in the studio, two video-cassette recorders and three open reel video-recorders, of which latter equipment one was used mainly for reference taping, and a sound tape recorder and a record player unit. There were also eight TV monitors, microphones, amplifiers etc. The equipment also included portable video cameras, including tape recorders and a sound tape recorder for outside recordings.

3.4 Personnel

The staff comprised 10 people – two TV producers, 2 technical assistants, 3 cameramen (pupils from Kalix People's College), an editor/programme leader, a secretary and a station manager, also the person liable for the programmes.

During the entire trial period the permanent staff comprised the station manager, the editor and the secretary. The two technical assistants worked at the station for most of the experiment. With regard to the other posts, a shift system was applied, and some 10 persons worked as TV producers and cameramen respectively. With regard to producers, there was difficulty in finding people with a knowledge of production who were able to work in Kiruna for any longer periods of time. Pupils studying mass media subject at the Kalix People's College worked in threes for periods of four weeks, and in this way were able to gain the practical experience their studies demanded.

Apart from the permanent staff, certain freelance workers were employed for specific assignments. Among these were two Finnish-speaking Kiruna residents who worked on a programme for Finnish speakers.

3.5 Programme activities

Kabelvision Kiruna's first broadcast was transmitted on January 24 1974 and thereafter the station transmitted two original broadcasts a week until May 16. The programmes were broadcasts on Tuesdays and Thursdays commencing at 1930 hrs and were re-run the same evening at 2100 hrs and the following day at 1100 hrs. In cases where the original broadcast lasted longer than 90 minutes the re-run at 2100 hrs was omitted.

Apart from the ordinary broadcasts on Tuesday and Thursday evenings, extra broadcasts were transmitted on a few occasions. This was the case during the miners' conflict in March and in connection with programmes about schoolwork in early May.

42 original programmes with a total duration of about 35 hours were broadcast. Total broadcasting time including re-runs was about 90 hours. It is difficult to categorize the programmes, since the various fields often

overlap. What is "local social information" may often at the same time be "educational", programmes about "home and school" could often just as well be classified as "parent training" etc. The duration of a programme is also a rough way of measuring, since the pace of the programmes and the amount of information they contain vary considerably. With these reservations in mind, it may be said that the predominant factor in Kabelvision Kiruna's programmes was local social information, which answered for approximately 40 % of the total programme time. The second most common item dealt with questions involving the home and school, c. 20 %. Other programmes dealt with adult education, parent training, consumer questions, and pre-school activities.

The programmes dealing with the miners' conflict in Kiruna in March 1973 held a special position. Some of these programmes were purely news programmes. The production of such programmes did not constitute a part of Kabelvision Kiruna's task, but they were produced as a result of the special situation existing at the time.

3.6 Economy

General

The costs of the CATV experiment in the fiscal year 1973/74 totalled circa Skr. 1 million. Of these costs the municipality of Kiruna answered for Skr. 100,000:–, SR for Skr. 300,000:– and TRU for the remainder. A large part of these costs refer to the planning work and therefore constitute once only expenditure. The total costs also include investment in primarily technical equipment. Finnally, the costs also include evaluation, which in this case was particularly extensive because of the experimental nature of the project. The remainder of the total costs, circa Skr. 475,000:– can be directly referred to the trial period during the first half of 1974. The costs for the trial period cannot, however, be taken as a basis for conclusions regarding the cost of a CATV station of the size involved in this context. This is above all because of the fact that the station had to be operated on the personell shift system described previously. The brief planning period also created other costs which would not normally be incurred.

Planning

Planning costs in the autumn of 1973 totalled circa Skr. 140,000:–. This includes primarily costs for personnel but also for e. g. travel between Stockholm and Kiruna, trips to the UK (study trip). Planning costs for a CATV station of the same type as that in Kiruna could be reduced somewhat, especially if the experience gained there is utilized.

Investments

There were two kinds of investment – investment in technical equipment for production, and investment in expansion and supplementing the

existing CATV net. In addition there were investments in certain inventory and the cost of interior decorating and fitting. The CATV net was supplemented for circa Skr. 40,000 in order to obtain satisfactory technical quality. The network was also expanded for circa Skr. 60,000:–. It is hardly possible to form any general conclusions on the basis of this. Costs are dependent on distances between housing areas, type of housing, and other local conditions.

For the above mentioned Skr. 60,000:– a further 500 or so households were included in the cable area. Expansion has in this context involved linking the housing areas with the central antenna network. Investments in technical equipment totalled about Skr. 120,000:–. This sum includes some equipment from TRU which was entered at current value, which means that cost of buying new equipment would have been considerably higher. Some technical equipment was also rented for the duration of the trial period. Inventory, the rebuildning of the studio etc. cost circa Skr. 35,000:–.

Running costs

Running costs totalled circa Skr. 475,000:– of which barely half comprised wage costs. Because the work was subjected to all the difficulties involved in starting experimental work, the station personnel had to work a lot of overtime. Also wage costs were probably higher than they would have been in the case of more permanent work. Otherwise running costs comprised costs for office material, telephone bills, travel, information, technical operations, and programme costs including video tapes. This latter item covered some 20 % of the total running costs, or Skr. 50,000:–. Two major items of expenditure, travel and telephone calls, were due to the large number of temporary producers employed.

Evaluation

Evaluation cost about Skr. 150,000:–. The major part of this sum covered the surveys conducted by the Institute of Sociology of the University of Umeå, and an audience poll conducted by SR/PUB. SR/PUB conducted a further audience poll paid for by the Nordic Council.

3.7 Results of evaluation

During the trial period SR/PUB conducted two audience polls (SR/PUB, report 125/73). These surveys were implemented in the same way that SR/PUB conducts its national audience surveys.

The Institute of Sociology of the University of Umeå made an extensive evaluation in the spring of 1974 of the activities of Kabelvision Kiruna. This was presented in a special report as were the audience surveys carried out by SR/PUB. The following is merely a summary of the evaluations.

Audience surveys

The two PUB surveys cover seven days each (Sunday, March 3 through Saturday, March 9, and Sunday, May 12 through Saturday, May 18). The number of people interviewed with regard to the two Saturdays and Sundays was relatively low and is therefore not listed. With regard to Monday and Friday some 175 persons were interviewed and in the case of the other days some 270 persons.

At the time of both surveys about 95 % of the households had access to a TV set and 89 % of them could receive Kabelvision Kiruna's broadcasts. Of these about half thought that reception was at least as good as in the case of TV1 as regards picture, and three quarters found no difference between TV1 and Kabelvision as regards quality of sound. Of those who thought that the picture and/or sound quality was less good, the greater majority (87 %) still felt that the programme quality was good enough for a half hour programme. The results of the two surveys are largely the same.

- with regard to all CATV activities operated here, to test the importance of duration and time of programmes, e. g. in the context of shift work,
- to note how CATV can supplement existing media such as the press, advertizing sheets (direct advertizing and regional radio, and supplement existing TV broadcasts (TV 1, TV 2 and Finnish TV 1),
- examine the prerequisites for active journalism geared to covering social aspects,
- in CATV work to particularly consider the Finnish-speaking population's need for programmes in their native language,
- with reference to the above to try out various forms of locally produced and/or pre-produced adult educational programmes and information on educational opportunities,
- in the context to try to increase interest in studies, i. a. among new categories of participants, and to create activities and affinity in various forms,
- to determine whether CATV can be used in parent education,
- to determine whether contact between the home and school can be increased by means of various CATV programmes, e. g. by distributing, possibly with local adaption, to parents programmes intended for

Table 1 Viewing – Kabelvision's evening broadcasts and morning re-runs. Percentage.

	Evening broadcasts		Morning re-runs	
	March	May	March	May
Every evening they were broadcast	8	5	0	0
Practically every evening they were broadcast	16	16	1	1
Occasionally	31	38	5	4
More seldom	33	33	11	16
Never	12	8	82	79

school children. Particular attention should be paid to possibilities of showing parents glimpses of internal school work,

- ☐ to test various forms of locally produced and/or pre-produced CATV programmes for pre-school children, both for children at home and children in nursery school,
- ☐ to test various forms of local information and local debate, and in the context to note how CATV can develop municipal democracy by giving the population the opportunity of utilizing information and reflections of opinion as a means of exerting pressure and obtaining bases for thought and action,
- ☐ to test various forms of consumer information with a local angle,
- ☐ together with teachers and pupils to determine the possibility of integrating into schoolwork at times suitable with regard to schedule locally produced programmes and possibly locally adapted centrally produced programmes.

The parties were agreed that experimental work of this sort should not be too strictly controlled. Therefore no priority was given to any specific objective, and it was also emphasized that the production group's assessments and the interest of those involved must play an important part in programme content.

Table 2 indicates answers to the question how often viewers watched the evening broadcasts, classified by age and level of education (since the answers indicate no difference between males and females, no male/female classification is noted).

As may be seen the largest Kabelvision audience was found among those with a low level of education. The results tally well with the viewing figures for national TV with regard both to age groups and to

Table 2 Kabelvision viewers classified by age and level of education. Percentage.

		Age				
	Tot.	9–14	15–24	25–44	45–64	65–79
Every evening + almost every evening they were broadcast	21	17	15	23	24	20
Now and then	38	64	32	35	36	32
More seldom + never	41	19	53	41	41	48
Number of interviewees	437	47	74	219	72	25

Level of education		
Low	Average	High
27	19	9
35	33	38
38	48	54
185	149	56

education. The following results were obtained in the case of the four CATV programmes broadcast during the two weeks covered by SR/PUB's surveys. (In SR/PUB's surveys those who watched at least half the programme are rated as viewers of that programme).

		1930	2100	1100	hrs
Tuesday					
March 5	Debate prior to trade union elections in Gruv 12 (duration 1 hr 40 mins)	18 %	no brd	1 %	
Thursday					
March 7	Presentation of Game and Fish Conservancy Assn etc. (duration 42 mins)	11 %	3 %	2 %	
Tuesday					
May 7	Programme about school today (duration 1 hr 35 mins)	19 %	no brd	3 %	
Thursday					
May 9	Programme about penalism in schools (duration 1 hr 20 mins)	17 %	2 %	3 %	

No brd = no broadcast.

As can be seen, the major part of the viewers opted to watch the first evening broadcast at 1930 hrs. The re-runs the same evening and the next morning attracted only a couple of percent each. The figures for the forenoon broadcasts should be related to the number of people in the area who work shifts in the evening and can therefore watch the morning re-runs. This group comprises somewhat less than 10 %. In both surveys the interviewees were asked whether they viewed a Kabelvision programme broadcast much earlier. Just over 40 % of those interviewed in March stated that they had seen the programme on February 19 which dealt with a planned highway construction in Kiruna. In May the question referred to a programme broadcast on May 2 dealing with employment opportunities for women in Kiruna. Just over 25 % saw this programme.

SR/PUB also investigated how well the CATV programmes competed with the two national channels. Contemporary figures for TV consumption in the country as a whole are available for the May week, while comparisons for the March week are based on average viewing figures for certain serials. No systematic differences in the total TV consumption as regards Kiruna vis-à-vis the rest of the country can not be noted in the case of the evenings when Kabelvision did not broadcast. The results of the surveys conducted for the evenings when Kabelvision did broadcast indicate that the entertainment programmes (the Onedin Line and Helen – woman of today) lost viewers to quite a large extent to the Kabelvision programmes, while the national news programme Rapport lost viewers to a far lesser extent. The survey results, however, are not entirely clear, since a programme entitled "Fleksnes fataliteter" attracted as large an audience in Kiruna as it did in the rest of the country when it was

broadcast at the same time as a Kabelvision programme. The survey was not comprehensive enough for any more far-reaching conclusions to be drawn, but the results indicate that the Kabelvision programmes, the content of which can primarily be classified as local social information, did not attract viewers at the expense of the national channels' information programmes. The programmes were viewed by people who would otherwise either not have watched TV or preferred the Kabelvision programmes to the national channels' entertainment programmes.

In connection with the miners' conflict at LKAB in March 1974, Kabelvision's coverage was the subject of a special evaluation by the Institute of Sociology of the University of Umeå. During the three days of the conflict, Kabelvision, in addition to its scheduled programmes which also dealt with the miners' conflict, ran seven extra broadcasts containing current details on the conflict. These broadcasts can naturally be classified as social information but they were also – because of the extraordinary circumstances – broadcasts with a direct news content.

It can be determined that during the conflict, Kabelvision Kiruna's evening programmes attracted a large audience.

Broadcasting time		Viewers, percent
Tuesday, March 19	1930 hrs	50
	2100 hrs	25
Wednesday, March 20	1930 hrs	45
Thursday, March 21	1930 hrs	45

Particularly worth noting is the high audience figure for the Wednesday programme, since normally no original broadcasts were transmitted on Wednesday.

The following viewing figures were noted for the extra broadcasts and re-runs transmitted in the daytime during the week in question:

Broadcasting time		Viewers, percent
Tuesday, March 19	1700 hrs	33
Wednesday, March 20	1100 hrs	9
Thursday, March 21	1100 hrs	7
	1500 hrs	6
	1730 hrs	15
Friday, March 22	1100 hrs	5 (the strike was called off during the afternoon of March 21)

It is natural that the viewing figures for these extra broadcasts and re-runs were considerably lower than for the evening broadcasts since it was difficult to provide information on the extra broadcasts and the broadcasts were transmitted at considerably less attractive viewing times. Taking these facts into consideration, the audience figures must be considered as being relatively high, a fact indicated i.a. by a comparison with audience figures for the forenoon res-runs normally broadcast by

Kabelvision on Wednesday and Fridays, viewed by a couple of percent.

The survey also indicates how many programmes the interviewees watched: 70 % watched some programme during the week, and c. 30 % watched four or more programmes. Both figures must be considered relatively high. With regard to the composition of the CATV audience during the days of the conflict, it may be noted that a large section of the 15 - 24 year olds (72 %) watched two or more programmes. This age group normally comprises people with a low consumption of social information and it is therefore remarkable that so many of them watched TV programmes which provided social information.

Another group which is normally difficult to reach with social information is that comprising shift workers. In the case of the programmes broadcast during the miners' conflict, however, shift workers watched the Kabelvision broadcasts almost as much as non-shift workers did (58 % as opposed to 61 %). One explanation of this is that the shift workers watched the morning broadcasts to a large extent. The interviewees were also asked which medium they considered provided the best coverage of the miners' conflict.

The following results were obtained:

National TV	6 %
Kabelvision	39 %
Newspapers	15 %
National radio	3 %
Regional radio	2 %
Miners' radio	6 %
Don't know	29 %

Although the method of interviewing these respondents probably caused a large number of them to favour Kabelvision, the relation between the various media is still of interest. Relatively many favoured Kabelvision and the newspapers, while only a few considered radio, regional radio included, to have been the best medium as regards coverage of the conflict. The advantages of Kabelfision were felt to be the speed with which information was provided, the clarifying interviews, and the fact that both sides involved in the conflict were given a satisfactory opportunity of stating their case.

In order to supplement the more comprehensive audience surveys, which for economic reasons had to be conducted by means of written questionnaires, the evaluation group at the Institute of Sociology elected to carry out informal interviews with 22 representative households.

Although it is natural that the interviewees to a certain extent expressed a far too positive opinion of Kabelvision, the interviews still provided answers which were in several respects more detailed and therefore more vaulable than those obtained by means of the questionnaires.

Several of the interviewees stated that they had difficulty in obtaining a good picture and sound quality. It is, however, unclear whether this was the fault of the interviewees' TV sets or of the distribution network and the transmitter.

Most of the interviewees felt that the main advantage of Kabelvision was that the programmes often covered local questions and that "ordinary folk" had participated in the programmes. They also expressed their great appreciation of the programme leaders for their "easy speech", "natural behaviour", "humour", "gentleness", and "humanity". These factors contributed toward the audience feeling more involved in the CATV programmes. This was reflected i.a. in the fact that family members and working colleagues often discussed the Kabelvision programmes.

The programmes appreciated most were the programmes on local subjects of debate, in which viewers could participate by telephone. A couple such programmes were broadcast. An important reason for the popularity of these programmes was that they permitted viewers to make direct contact with municipal decision-makers and authorities at a high level. Kabelvision has probably induced more people to interest themselves more in questions of municipal politics.

The programmes on schoolwork were also received with great interest. Even if attendance at PTA meetings was poor and contacts with school were few, there seems to be a strong desire for information on conditions in school. This desire has to a large extent been satisfied by the CATV programmes.

The interviews also indicated that Kabelvision Kiruna to a great extent reached groups which do not normally take much interest in or very much part in social information via other media. A remarkable factor in this context is the great interest shown by the Finnish-speaking households in the CATV programmes. CATV seems to have played an important part in satisfying the need for local social information to this minority group.

Shortly before the Kabelvision broadcasts commenced in January, and in connection with the termination of the trial period in May, the Institute of Sociology conducted interviews by letter with a random selection of people in the CATV area and with another random selection of people domiciled outside the area. Questionnaires were sent to the same two groups on both occasions. The dropout rate, however, was relatively high, 24 % in the January survey and 36 % in the May survey, and therefore the results are probably too high. In the January survey the interviewees were asked i.a. to state in what fields they felt the greatest need for information in the Kiruna area was to be found, and what fields they felt CATV should primarily concentrate on in its programmes. The survey indicated that there was a great need for and interest in programmes on municipal matters. The May survey indicated that the viewers to a great extent felt that Kabelvision had succeed well in providing information on municipal matters.

In the May survey the replies to questions regarding viewing in the spring indicated that audiences were largest during the first month, and that thereafter remained fairly constant. Figures from the May survey together with other audience surveys give average audience sizes of 30 % initially and 20 % in the middle and at the end of the period. In

comparison it may be mentioned that the SR educational programmes and programmes on social information transmitted in the evenings usually attract an audience of between 5 and 15 %.

Audience division by age and level of education tallies well with previous Swedish and international studies of TV consumption, i.e. the major consumers were between 45 and 64 years of age and poorly educated while those who viewed least were aged between 15 and 24 and were well educated.

That people with a low level of education watched the Kabelvision programmes to such a large extent, must be considered a positive factor in view of the fact that these people are generally difficult to reach with social information and education.

Consumption of Kabelvision programmes was also compared in respect of period of residence in Kiruna and degree of social integration. Two categories showed a higher percentage of low consumption than others: those who had resided for a relatively short time (less than five years) in Kiruna, and those with a low degree of social integration. A possible interpretation is that these categories feel less affinity with the local community and are therefore less interested in local social information.

In the surveys conducted in January and May, the viewers were asked what they considered important in a TV programme: that it was professionally carried out, or that it had a local connection. Although individual opinions changed between January and May, the overall pattern remained the same. Opinions were evenly divided between the view that one of the factors was the more important and the view that they were both equally important. As indicated in the table 3 the opinion was that the most successful aspect of Kabelvision Kiruna was its local connection.

Kabelvision Kiruna's aims also included trying to activate the public. About 80 % of those who watched Kabelvision programmes also discussed them at some stage in their homes, and circa 20 % discussed them often. The results are almost exactly the same in respect of programme discussions with friends and acquaintances. An interesting fact is that the less established groups (the less politically active, the poorly educated and those with a low utilization of social information) appear to have discussed the programmes fully as much as the more established groups.

The CATV programmes also affected social intercourse. About half of

Table 3 Percentage of viewers who felt that Kabelvision Kiruna was successful in various respects.

Skilled programme leaders	39
Discussion of local questions	70
Professional implementation	6
Influence on the programmes by the general public and by organizations	36
Inclusion of people with local connections	65
Good technical and pictorial layout	20

Note: Various n for the different alternatives, average n=144.

those who had viewed the programmes were at some time visited by acquaintances who came specifically to watch CATV. Households which can in some sense be considered as being better integrated socially received more visits than others although the difference was relatively slight.

CATV has also had some effect with regard to interest in various fields. About 14 % of those who watched Kabelvision programmes acquired an increased interest in some field. A limit number, 7 %, also contacted Kabelvision at some time. In this respect there was also a tendency towards effects being somewhat greater among those who are better integrated socially. On the other hand CATV activities do not appear to have induced the public to contact the organizations to a greater extent.

Kabelvision also affected other mass media consumption. The net effect (i.e. those who reduced their viewing minus those who increased their viewing) in the case of national TV among those who watched CATV was a reduction of about 15 %. In the case of radio the corresponding decrease was about 10 %. It appears to a very large extent to have been the more established groups (younger, better educated and better integrated socially) that reduced their viewing while in the case of radio the situation is more diffuse. There, for example, young people, those who to a great extent absorb social information, and the poorly educated were over-represented in the group that reduced its viewing. No change could be noted with regard to newspaper consumption. The results can probably be explained by the fact that TV and radio are more like competing media in relation to CATV while newpapers are more of a complement. It also proved that viewers primarily watched the CATV programmes in order to acquire "general knowledge, practical knowledge and advice" (50 %). Corresponding figures for national TV and radio are 38 % and 20 % respectively. With regard to "entertainment and relaxation" the majority elected to listen to radio (77 %) while 57 % watched national TV and 37 % CATV for this reason.

Organization study

A questionnaire containing questions on background data and attitudes to the CATV experiment were submitted to practically all the societies/organizations in Kiruna in January 1974. This was followed up in May of the same year by telephone interviews with the organizations which had participated in the broadcasts and with a selection of those which had not taken part.

Some 30 organizations took part in the programme activities. The division between various organization indicates a slightly high degree of representation in the case of recreational and sports organizations, and a somewhat low degree of representation in the case of religious organizations. This is probably due to the viewers' great interest in outdoor activities and sports, and with the experimen's character of social information.

Most of the organizations which participated in Kabelvision did so once only, and therefore it is difficult for them to assess what importance CATV had or could have for information and activation measures. On the other hand the broadcasts naturally elicited the opinions of members and the public. Circa 40 % of the organizations received views, about 2/3 of them positive. The organizations appear above all to have been surprised by the penetrating power of CATV and by the response it elicited. The more mixed or negative reactions referred primarily to the way the programmes were arranged.

Of all the interviewed organizations, about 80 % considered that the experiment should be continued. About half, however, stated that in such case the broadcasting area should be extended. Since the number of non-participant organizations was over-represented in this group, this can also be interpreted as the organizations having somewhat underestimated CATV's reach and penetration. Many were also of the opinion that the station should improve its preparatory work among the organizations and that contacts with Kabelvision should be improved in the event of the experiment being extended.

The reasons the non-participant organizations gave were inter alia that they knew too little about the experiment and that they had too little time in which to submit programme proposals. Some organizations also pointed out that they had no members or conducted no activities in the broadcasting area. Finally, some were of the opinion that Kabelvision had not followed up the contacts made with some organizations.

School programmes

In the latter part of the spring an experiment was carried out at Bolagsskolan in Kiruna, whereby children at senior level of comprehensive school produced TV programmes as an integrated part of their schoolwork. A total 75 pupils took part in production work in various ways. These pupils, their parents and the teachers in the subjects in which the experimental work was conducted, were afterwards interviewed.

In the main the CATV experiment was positively received by pupils, parents and teachers. 59 % of the children stated that they were interested in working in a similar way again, and 32 % felt that they had learnt more than they would have done using the methods they had previously been using. The pupils stated that the most positive aspects of the experiment were the practical link with the teoretical studies and the independent group work.

The teachers were agreed that the children showed more activity and interest than usual and generally appeared to find schoolwork more stimulating and varied. The teachers also thought that the concrete work with picutres would give the pupils' knowledge a deeper basis and make it more lasting.

Parents proved positive to the importance of CATV to contact between school and the home. 90 % of 52 parents who had seen one of

the two programmes broadcast in early May on the subject of work in school, thought that local programmes on school and working conditions in school would create better contact between school and the home, and 77 % felt that they had acquired a better knowledge of their children's school and the current school debate.

Interviews with station personnel

One of the reports from the University of Umeå presents interviews with some of those who worked at the CATV station, 9 people in all. The results of these interviews indicate i.a. that it was felt that the planning time for the experiment was too brief, with the result that the staff was insufficiently co-ordinated and the technical equipment was not properly trimmed when the broadcasts started. The short planning time and the fact that there was not time enough to prepare the technical equipment prior to the commencement of the broadcast, also meant that contacts with the general public and with organizations and associations in Kiruna were fewer than intended. It was also felt that the turnover of staff at the station was too high and that more local people should have been included in the experiment. It was felt that the technical equipment was of sufficiently good quality for broadcasts of this sort. Some, however, stated that they missed a TV camera which did not require linking to the network for outdoor pictures. Personnel also put forward a wish for a telephone switchboard which would have been useful i.a. in the one or two programmes involving telephone participation by the public.

The station staff were most pleased about the debate programmes which dealt with questions of importance to Kiruna, programmes dealing with the miners' conflict, and school programmes. On the other hand it was felt for various reasons – because of the educational associations' planning time – that the programmes on local adult education were less successful.

3.8 Concluding assessment of the first trial period

The CATV experiment can hardly be said to have started in particularly favourable circumstances. For a long time it was unclear which parties would participate in the experiment and thereby also under which forms this would take place. The board of Kabelvision Kiruna was appointed in mid-October 1973 and stipulated the form of the work. It was first then that the concrete preparatory work could commence.

It proved very difficult to find producers who could accept a tour of duty in Kiruna for the five months required. A shift was therefore adopted, whereby some ten producers worked at the CATV station for shorter or longer periods.

The installation of the technical equipment also involved several problems. The villa which was to be used as a studio building was not available until a month (three weeks) after the promised date. The actual

installation work proved to demand a great deal of work and time and was not completed until the actual commencement of the broadcasts on January 24. At that time there remained a couple of weeks work to trim the equipment and make it work without inteference.

The educational associations were contacted in the autumn, but for several reasons it proved difficult to work closely with them. One reason was that the educational associations' spring programme had already been planned, another was that it was difficult to persuade the associations of the easy handling and the possibilities of the CATV equipment since this had not yet been installed. Therefore adult education did not receive the coverage in Kabelvision's spring activities that had originally been intended.

The CATV experiment in the spring of 1974 was too brief, a mere four months, to permit any more far-reaching conclusions to be drawn. With these reservations in mind, the results of the experiment indicate:

that interest in CATV in Kiruna was so considerable that 89 % of those interviewed in the panel survey stated that they wanted the experiment to continue.

that audience figures for the programmes were normally around 20–25 % and that a couple of programmes attracted as many as 45–50 %.

that the CATV programmes attracted viewers primarily among those who would otherwise have watched national TV's entertainment programmes or would not have watched TV at all.

that the CATV programmes to a large extent interested the poorly educated who are otherwise difficult to reach with social information, and persons with few social contacts.

that the public overlooked technical failings in the programmes and the fact that the programmes were broadcast in black and white, provided the subject interested them.

that CATV broadcasts to a large extent statisfied a latent interest in municipal matters.

that the greatest advantages of CATV according to interviews with the public, were that the programmes covered local questions and that Kiruna residents participated in the broadcasts.

that the programmes appreciated most were those where the public could talk to municipal leaders on the telephone.

that during the miners' conflict at LKAB Kabelvision showed what a fastworking and audience-captivating news media a local CATV station can be.

that Kabelvision's sub-experiment involving programmes made by school-children showed positive results and showed how CATV can be used in schoolwork and to provide information to parents.

that information about the possibilities of CATV can best be provided by the public and associations being given the opportunity of practical knowledge.

that the technical equipment, once the problems of installation and the

first broadcasting period had been overcome, functioned satisfactorily. The problem was that the batteries for the portable videotape cameras proved sensitive to cold, which in view of the latitude of Kiruna, proved awkward.

that production work was relatively difficult because of the re-runs and the reference recording of all television programmes.

that in the case of some jobs the turnover of personnel was far too great. A certain turnover of personnel and utilization of external producers is certainly a good idea at a local CATV station, but the major part of the production group should consist of personnel employed on a permanent basis.

that it is a great advantage if the staff of a CATV station is versatile and can alternate between various tasks. It is also essential that they have good local knowledge.

that no particular difficulties were incurred as regards observing the Radio Act, the broadcasting liability law, and the agreement concluded between the State and the Swedish Broadcasting Corporation.

4 Continuation of the CATV experiment

4.1 Reasons for continued experiment

In May 1974 the TRU Committee applied for extra funds from the Crown in order to be able to continue the CATV experiment for a further six months.

The Committee gave i.a. the following reasons for wishing to continue the experiment.

Already after two months the trial period proved too brief to provide any satisfactory assessment of the CATV experiment. The number of people in the area who watched Kabelvision's programmes totalled between 14 % and 50 %, figures which were felt to be favourable as regards obtaining interesting results in a continued trial period. The Committee pointed out that the far too brief planning period had the result that organizations, primarily educational associations, had not been included in the experiment to a satisfactory degree. As the broadcasts were transmitted more and more individuals and organizations became interested, but often too late to participate. It did not prove possible to chart what effects could be achieved among viewers in the form of increased interest in various questions or more active participation in various events and club activities. It could also be assumed that so-called experimental effects influenced viewing figures and attitudes. These effects should be less prominent in a second trial period.

In the discussions which preceded the second trial period and were held by the board of Kabelvision and with the personnel involved and with representatives of the various organizations, emphasis was placed on the importance of testing whether CATV could function as an alternative television, a new medium. In this context it was intended to try out new work forms and principles for selection of form and content in programmes. It was felt to be important to test whether Kabelvision staff could make programmes together with the local population and that programmes could be produced by the local people and not just about them. Active participation by individuals and organizations was also felt by the board of Kabelvision to be necessary prerequisite for the few Kabelvision employees to be able to produce the number of programmes desirable from the point of view of evaluation. During the first trial period it had been possible to discern this aspect of Kabelvision's objectives but not achieve it.

4.2 Planning

The detailed planning for a continuation of the experiment commenced in August. The experience gained in organizing, in personnel matters, and in economic questions during the first trial period played, as may be seen by the following, an important part in the construction of the continued Kabelvision Kiruna. In December 1974 the Riksdag decided to grant more funds to Kabelvision Kiruna.

4.3 The board and objectives

The structure of the board remained the same as in the first trial period, with representatives of Kiruna, SR and TRU included. The aims of the second trial period were also the same as those of the first trial period.

4.4 Personnel

Staff comprised six and a half posts and a few local telecommunications technicians who were responsible for service and maintenance and worked on a hourly basis. For short periods the station also employed pupils from the Kalix and Malmfälten people's colleges. Staff were recruited with a view to using people with a good knowledge of local conditions and without extensive professional backgrounds *in order* to avoid too much emphasis on "heavy" TV production as practised by SR and TRU. In this way it would also be possible to achieve a more authentic experimental situation which would correspond better to a possible future reality than would be the case if recruiting were conducted along the lines applied in the first trial period. Employees had certain primary functions but at the same time it was clearly stated that they would all work on as many different tasks as possible so that e. g. "programme technicians" could also do editorial work and production work over and above their primary tasks. The intention was to create a versatile working situation to the benefit of the individual and the gain of Kabelvision. Staff were employed in September. They were trained with the help of technicians and producers from TRU.

On the whole it proved possible to carry out tasks satisfactorily using the staff that was available. It could possibly be said to have been to small, a fact emphasized by the relatively large amount of overtime. The desire to allow people outside the station take care of as many tasks as possible has in certain cases required a lot of effort on the part of the staff in order to meet the demand for guidance and other services during an initial stage. In permanent CATV work, however, when other people than permanent employees have become used to independently assuming responsibility for production work, the personnel who worked in Kabelvision should suffice.

4.5 Weekend courses

In mid-September two weekend courses were held for the purpose of interesting organizations and individuals in the planning, production and follow-up of programmes. Some 30 organizations and also a few individuals participated in these two courses. A wide range of associations were represented, such as, for example, study associations, the Association of Handicapped Children, Fjärdern Ball Club, the Finn's Club, and the Marxist-Leninist Action Union. The course included practical production assignments, work on legislation and agreements, and inventory of ideas. Some 50 different suggestions for programmes were produced, among them the history of Kiruna, the Commission on Internal Work in Schools, local housing policy, the BD 80 Regional Planning Survey, hospital work, children's recreational problems, handicap problems etc.

4.6 Information

As in the case of the first trial period the local press paid only scant attention to Kabelvision. The CATV' station's request to have programme titles and broadcasting times inserted in connection with information on other TV and radio programmes was granted by only one newspaper. The reason given for this was that Kabelvision was felt to have too little new value and that the experiment covered far too limited an area. Information on programmes was provided primarily by means of weekly adverts in Kiruna Annonsblad. According to the evaluation, however, information was not sufficiently effective.

4.7 Broadcasting times

To permit reasonable time for planning, broadcasting commenced first on November 17 and as during the first trial period programmes were broadcast on Tuesdays and Thursdays at 1930 hrs. Re-runs were broadcast on Sundays at 1100 hrs. 1930 hrs on Wedsnesdays was reserved for any addicional broadcasts.

4.8 Broadcasting area and technical equipment

In comparison with the first trial period the broadcasting area was extended by almost 600 households. This was done on the initiative of a tenant-owners' association which also paid for the laying of the cables. The whole area included circa 2,300 households. The technical equipment was the same as that used in the first trial period but with the addition of yet another portable camera.

4.9 Programme activities

Kabelvision Kiruna's last broadcast was on Sunday, February 23 1975. During the second trial period 30 original broadcasts were transmitted, covering a total programme duration of about 32 hours. Total broadcasting time including re-runs was about 84 hours.

The programme ideas were largely produced during the weekend courses. Many ideas could not be realized because the limited staff did not have the time and because the people who produced the ideas could not, for various reasons, participate in producing the programmes. No detailed division by subject has been carried out yet. As in the case of the first trial period, it is difficult to describe the range of programmes in terms of categories since the subjects very largely overlap. It may, however, be said that the emphasis was on local social information. All the fields included in the objectives were more or less represented. They included school, parent training, programmes for handicapped people, consumer information etc. Adult education played a somewhat larger part than in the first trial period but even in this case it proved difficult to interest the educational associations to any major degree. This was due to shortage of time and personnel rather than to lack of interest. The restricted CATV area probably also inhibited any major involvement. Several study associations participated, however: TBV produced a programme about its activities, and ABF took part i. a. in connection with study circles on parent training. As previously, ideas and suggestions submitted by local residents played an important part in the selection of subjects for programmes.

The most interesting factor with regard to programme activities during the second trial period was not only that suggestions were received from those living in the area, but that local residents produced or partially produced several programmes. The most clearcut example of production by groups not included on the editorial staff comprised the programmes produced by the parties represented on the municipal council. In this context CATV station staff participated as contact men and, on request, assisted to a varying degree in technical work and in the production of scrips. Most of the production work, however, was done by the local parties. They were given technical help with editing but they themselves determined form and content entirely. As a conclusion to the political week, the station broadcast a debate between representatives of the local parties. This debate was planned and supervised by Kabelvision employees.

A programme on local mountain rescue work was produced by a group formed during a weekend course. Members of the group met in the evenings and at weekends. A technician from Kabelvision followed their work and gave them the help they asked for, but in principle the production work was the result of the group's fairly extensive work. The mountain rescue programme was remarkable because representatives of various organizations were united by the common interest in producing a CATV programme. In other words this programme was not produced to

express the ideology of one organization or to express personal involvement. The latter category included e. g. a programme about a retarded girl, where the girl herself and her mother were of considerable importance to both the idea and the production of the programme. According to the mother, this programme was also of great importance to the girl's personal development and self-confidence because of the new contacts she made and the understanding she met after the programme had been screened.

Another programme which was of fundamental interest was a programme about the pension age of miners. The idea and implementation was largely the work of a miner, a member of the Marxist-Leninist Action Union. He did a great deal of the work on the script, the filming, and the editing. Section 12 of the Miners' Union was invited to take part in order to present its – opposing – views but declined i. a. with the motivation that contract negotiations were imminent. The programme was the presentation of one side's views but was not put forward sufficiently clearly as such. It should be mentioned that Section 12 of the Miners' Union (Gruv 12) was offered the chance of producing a programme about its activities but did not have time to do so during the limited trial period.

Despite the special circumstances prevailing, the Kabelvision staff still did most of the work on several programmes. There were several reasons for this, i. a. that on a short-term basis and in view of the limitations of the experiment, it was difficult to interest sufficient people in sacrificing often considerable amounts of their leisure time.

A few news programmes were produced during the second trial period too; they dealt with the cleaners' strike in Kiruna.

4.10 Costs

The costs for the continues experiment were estimated at circa Skr 400,000:–, including evaluation of the experiment. The books have not yet been balanced at the time of writing, but the division by items is largely as follows: staff wages and telecommunications technicians' wages estimated at Skr 200,000, technical investments, rental costs for certain material and technical running costs at Skr 30,000:–, training of personnel including weekend courses at Skr 10,000:–. Other running costs, i. e. programme costs, information, transports, videotapes, telephone bills, reserves etc. are estimated Skr 95,000:–. The cost of videotapes which was very considerable in the first stage of the experiment, were kept down to Skr 10,000:– in the second stage since the videotapes purchased previously could be used again. Evaluation cost Kabelvision Skr 50,000:–. In addition the Institute of Sociology of the University of Umeå received other contributions to help pay for the evaluation.

The costs for the second stage of the CATV experiment were covered

by the extra Skr 325,000:– granted by the Riksdag, by the grant of Skr 50,000:– by the municipality of Kiruna, and by funds provided by the TRU Committee.

4.11 Evaluation of the second trial period

The Institute of Sociology of the University of Umeå also evaluated the second trial period. The evaluation included:

- ☐ informal interviews with station personnel and current registration of their contacts by means of so-called contact journals, and a supplementary questionnaire after the completion of the experiment.
- ☐ informal interview with 25 households in the broadcasting area.
- ☐ telephone interview with organizations and individuals who participated in preparatory weekend courses prior to the start of CATV in the autumn of 1974.
- ☐ informal interviews with a selection of individuals and organizations which participated in programme activities.
- ☐ questionnaires mailed to a selection of organizations (and other participants in weekend courses) which did not participate in programme activities.
- ☐ combined questionnaire and telephone interviews with a representative selection of residents in the CATV area, circa 400 persons.
- ☐ special evaluation of consumer programmes.

Processing of the collected material has not been completed, and therefore no definite results and analyses can be presented. Certain tendencies can, however, be noted.

Combined questionnaire and telephone interviews

A few preliminary details from the telephone interviews with a representative selection of residents in the CATV area, indicate that a third of these did *not* watch *any* programme during the second trial period. This is a somewhat higher figure than in the case of the first trial period.

Table 4 Comparative viewing figures for the first and second CATV trial periods. Percentage

	Trial periods			
	First		Second	
	Beginning	End	Beginning	End
Did not watch	7	23	7	4
Watched occasionally	33	32	58	62
C. once a week	31	31	24	22
C. twice a week	30	13	11	12
Total	101	99	100	100
No. of people	175	175	222	222

In the case of the two thirds who watched at least one programme, tabel 4 indicates how large a percentage viewed a given number of programmes at the beginning and end of the trial period, and as a comparison the corresponding figures for the first trial period.

As indicated in the description of the previous period's evaluation, the dropout rate was relatively high in the questionnaires then submitted by residents, which may mean that viewing figures are somewhat closer than the results seem to indicate. Those who did not answer the questionnaires can for the most part be assumed to belong to the category which did watch any programme.

Table 4 indicates that the percentage that watched "occasionally" is almost double as much as in the case of the second trial period, while the percentage who viewed regularly (c. twice a week) remains almost the same as at the end of the spring 1974. There are no results of audience surveys for individual programmes, but the data gathered indicates that viewing figures are somewhat lower than in the first trial period. On the other hand there seem to be more positive opinions from those who watched the CATV programmes and they seem to have been more conscious in their selection of programme than they were previously.

The preliminary results of the combined interview and questionnaire survey indicate that two thirds of those who watched a few programmes felt that they were fairly good or very good while one third felt they were mediocre. As comparison the same question was put with regard to national TV programmes with the result that one third considered them fairly good while two thirds felt they were mediocre or fairly/very bad.

Two concluding questions were put requesting interviewees to state whether they preferred local radio, local newspaper, or CATV as a permanent activity in Kiruna. In the case where the choice was between local radio and CATV, 61 % of the interviewees stated that they preferred CATV, 32 % local radio and 7 % "don't know". In the case where the choice was between local newspaper and CATV, 52 % preferred CATV, 32 % local radio and 16 % answered "don't know".

As in the previous evaluation, an investigation was made of whether the CATV programmes had induced any discussions. Somewhat less than two thirds of those who had seen programmes stated that the programmes led to discussions in the home, while 3/4 stated that they discussed the programmes with colleagues and other persons outside the household.

Interviews with participants in weekend courses

The two weekend courses held in September were geared to inducing more active involvement of the part of organizations and individuals. Representatives of the 28 organizations which participated were interviewed. Many of the participants interviewed had on their own initiative involved their organizations in CATV activities and had therefore been elected to participate. C. 4/5 of the organizations would have sent more representatives if there had been room for them. Opinions of the course

as a whole were very positive.

Most of the participants felt that the most important factor was that they had acquired an undramatic view of TV as a medium and that they had conquered the resistance or the fear they had previously had with regard to contact with the TV station. After the course most of them (80 %) planned to take part in Kabelvision's programme activities in various ways, contribute ideas, participate in programmes or themselves or together with others produce programmes. Despite the fact that most of the interviewees felt that it was important to provide information about their own orgnaizations' work, it is remarkable that many of the programme ideas submitted during the course and later illustrate or discuss questions of importance to the organization concerned rather than deal with the organization as such.

Of the approximately 50 participants in the course about half helped to produce programmes or took part in some other way. Interviews in connection with some ten produced and broatcast programmes show that they all found the work interesting, enjoyable and meaningful. What surprised them was that production work required so much time. The limited CATV area was felt by almost every one to be the greatest disadvantage of Kabelvision's work.

4.12 Concluding results of the second trial period

The results of the evaluation of the second trial period, comparison with the first trial period, and analysis and assessment of the overall experiment, will be available in the early autumn of 1975. A few preliminary conclusions can, however, be drawn already now on the basis of tendencies in the evaulation and the observations and interviews conducted by the project supervisors themselves.

The total number or people who to some extent watched some CATV programme during the second trial period seems to have decreased somewhat compared to the first trial period. The number of people who watched CATV regularly corresponds to the number who watched CATV regularly towards the end of the first trial period. That this number remained constant during the whole of the second trial period can be interpreted as a somewhat smaller but faithful audience having emerged, but it could just as well mean that the nature of the programmes caused viewers to select the programmes that interested them to a greater degree than they did in the first trial period.

The programmes were appreciated approximately as much as during the first trial period and considerably more than the national TV programmes were. This is remarkable, not least in view of the fact that so many programmes were compiled by people outside the station and that the station worked with a relatively inexperienced and small staff.

There is reason to believe that had the experiment been continued for a longer period and covered a larger area, even more people would have utilized the opportunity of producing their own programmes. Limita-

tions in the experiment contributed beyond doubt to the fact that not more people had the opportunity or felt that the work was worth the effort. This was not the only reason, however. It takes a long time to get people to take active part in TV instead of merely being entertained or informed by it. To change long existing views on a medium about whose way of functioning many have held a fixed opinion, cannot be done in a few months of experiment.

There were some discussions about lack of factuality and one-sideness in programmes, but there were no serious conflicts regarding the Radio Act and programme regulations. But what would happen in the case of a permanent CATV station operated with the relative openness that existed in Kiruna? Would certain groups and interests take over? Or would there be a natural balance in the face of the new responsibility that would suddenly be shared by a CATV station and the public? Can a medium that is interesting and that arouses interest be created in co-operation between different views and editorial illustration? These are questions that remain to be answered. In the interviews conducted with staff and participants it was emphasized that the relaxed and trusting relationship that was to a certain extent created in Kiruna, means a great deal to the possibilities of producing different programmes. One view, which was confirmed by many, is that many programmes, primarily the interviews, gave an impression of a relaxed atmosphere. This was i. a. because the participants "knew each other". In other contexts this has been said to be a dangerous trend involving the risk of corruption of journalistic integrity, of becoming too close to those one is presenting. Does this apply to local means of communication such as CATV claims to be?

In contacts with representatives of organizations and individuals in Kiruna the question of what CATV could be used for were it permanent was often discussed. One idea often put forward was to see the medium as a part of the environment over which control is exercised. Thus it would be natural e. g. for study circles to use CATV as a part of their work, to present values, to express things artistically, to examine the society in which we live, depending on the subject the study circle was about. "Creative groups" have been mentioned as a natural and necessary consequence of a community acquiring a CATV network. One fear often expressed in respect of media with strong local links is that they can acquire far too narrow a view of life, that they seldom move outside the geographic or ideological boundaries of the community. There is hardly anything in the Kiruna experiment to confirm this fear. It could rather be claimed that several of the programmes produced on the basis of the local view provided greater opportunity of indicating the general aspects of certain problems than a general national programme. A retarded girl, living among us, made it easier for us to identify with other similar cases. The highway to Norway does not only involve environmental and recreational questions applicable in Kiruna. Miners' pension age is not merely a question of local interest.

Local radio has often been emphasized as being a cheaper, more easilt

handled alternative to local CATV. Obviously local radio can in principle be used in the same way as CATV in Kiruna with the functions described here. To state that television as a medium has qualities that radio does not possess would be a triviality more than anything else. On the local level the evaluation emphasized the importance of people being able, via television pictures, to get to know the appearance and attitudes of people in their immediate vicinity. This can apply to politicians but also to people encountered in everyday life. The programme about the handicapped girl is a good example of how the local visual medium can illustrate people's problems. The differences between radio and TV as exhibited by people's media habits are not dealt with the Committee in this context, but such habits obviously apply in the local context too.

Apart from the conclusions presented by the Committee, the following may be said of the second trial period:

- ☐ the technical faults and failings in the programmes were more of an advantage than a disadvantage since they emphasized the programmes' impression of spontaneity and closeness to the viewers.
- ☐ the weekend courses on TV production were of great importance to the programme activities.
- ☐ the relatively untrained and small staff at the CATV station worked very well in the circumstances. In the vent of permanent work another person would be required particularly as the contact work required would have to be stepped up. Local knowledge proved very useful. The use of local maintenance men also worked satisfactorily.
- ☐ there were some technical problems, above all in repsect of a rented 1" videotape recorder, but on the whole the equipment served its purpose. Reliability, however, is a prerequisite when operating so far from works facilities.
- ☐ the cost of operating permanent activities of the same kind and scope as the latter trial period in Kiruna need not exceed Skr 1 million p. a.
- ☐ also during this second stage Kabelvision Kiruna to a large extent reached groups which are other wise difficult to reach with social information.
- ☐ the activation effects of the programmes broadcast during the second period were at approximately the same level as during the first period. As an effect of an individual programme may be mentioned according to information supplied by the parties, the political week induced a number of people to apply for membership in one or two political parties.

Finally the Committee wishes to draw the general conclusion that CATV as it was used in Kiruna, should be considered a separate medium from ordinary television. CATV is neither a pure extension nor a miniature version of ordinary TV. It must primarily be utilized for those tasks which the national TV network cannot complete: reaching specific groups rather than a general public, emphasizing local connections and on the basis of local views create understanding for general problems. CATV must primarily be made available to those who do not normally

have access to any other means of expression. In a broad sense it must be used for education and to permit an extended debate on society, consumption, etc. Entertainment in the ordinary sense is not a primary task but CATV should contribute to reinforcing the tendencies noted, e. g. that the public considers municipal politics interesting. CATV should not seek to attract a passive audience but instead allow people to express themselves and communicate with one another.

Even if CATV should be regarded as a medium with special properties, it must not be isolated from other media and methods. It is only *one* factor in the vicinal society's social and cultural life.

5 Views on continued development

5.1 International trends

The international development of CATV or wide wave communications as it is often called is difficult to assess. It is impossible to describe the general international situation since conditions vary so much from country to country, and it is moreover sometimes difficult to tell the difference between fantasy and reality.

Many hopes and fears centre round wide wave communications. The hopes are primarily of two entirely separate kinds. The one is to commercially exploit a new technology, the other is to acquire a means of realizing democracy where even people "with no language" can have their say. The fears are for the risk of a multi-channel passivizing surplus of entertainment and information, and the threat of isolation or control of people by CATV working in conjunction with computer technology. These are widely separate interests which sometimes make the international debate on wide wave communication so unfactual that it is difficult to take it as an indication of what developments can be expected.

It is also difficult to make prognoses for individual countries. In 1971 the Sloan Committee estimated that the United States would have a 50 % CATV coverage of households by 1980, while according to a representative of the International Press Institute the present prognosis has been revised to somewhat over 20 %. He states that CATV in the U. S. is in a period of reduced growth but that development has not stagnated. There are a great many legal, technical, and copyright problems that are far from solved. For example there is as yet no good equipment for Pay TV. Despite these problems the same source claims that CATV will still radically alter the role of television. The Broadcasting Institute of North America is dubious about the development potential of CATV. It is not sufficient to multiply the already large amount of TV programmes. The Institute is also of the opinion that a range of programmes based on local material could be dull and trivial. The many channels must be used for something new and different if the subscribers are going to be willing to pay high fees. Many new and attractive components must be put together to make wide wave technology an independent system.

Although CATV stems from the U. S. it expanded more rapidly in

Canada. There the conditions for its development are different, the motives for using it stronger, and the rules freer. Le Conseil de la Radio-Télévision Canadienne (C. R. T. C.) which issues licences and regulates the prerequisites for CATV in Canada has from the beginning regarded CATV as an independent means of communication with cultural functions of its own. C. R. T. C. president Pierre Juneau has said that Canada "is one of the most interesting laboratories for forms of communication especially in the fields of CATV and satellites".

He also stated that "decades of passive viewing have led the public to believe that it can't do anything to alter its influence on television. Not even any mention has been made of any effective way of persuading the present system to permit extended participation in the production of programmes". (Le Monde, March 24–25 1974).

According to the Financial Times (February 24 1975) the five experimental stations at present operating in the U. K. will not survive the Annan Committee's report which is to present proposals for the future of television in 1976. The British government opposes the extension of CATV networks while the Post Office (which has a field of responsibility roughly equivalent to that of the National Swedish Telecommunications Administration) favours it and has informed the Annan Committee that because of limited aire space every TV expansion in the Eighties and Nineties must be by means of cables.

In Belgium CATV is said to be expanding at the rate of about 3000 new subscribers a week. There are now 6000 kilometres of cable and 600,000 subscribers, which means a 20 % coverage of the country's households. A considerable expansion of CATV in Italy may be expected after the Supreme Court revoked the Minister of Communications' veto on local CATV productions.

Denmark's way of handling the CATV question is interesting. In June 1973 the Folketing instituted a new radio and TV law. The new legislative proposal included the right to locally or regionally acquire a license to produce and broadcast radio or TV programmes. The Folketing did not accept this part of the proposal. Instead the Ministry of Cultural Affairs had to appoint a special group to deal with "an experimental distribution of audio or visual programmes by means of cable systems in individual local areas at the latest during the 1977–78 parliamentary year". Only one municipality, Varde, has hitherto applied for a license and started the experiment, but according to Berlingske Tidende (Dec 1974) there are a couple of hundred local groups in the country preparing local TV broadcasts. The results of the experiment will form the bases for a new law by 1978 at the latest.

A book financed by the Council of Europe (Wangermée et Lhoest: L'apprès télévision) mentions three generations of CATV, the passive, the active and the interactive. The first refers to improvement of picture quality by means of central antennas and the re-broadcasting of programmes from other countries. The second generation involves locally produced programmes, specially ordered programmes (Pay TV), a certain simple service, news, weather, time checks etc. The third generation

involves the possibility of consulting databanks, requesting programmes from videotheques, long distance communication between groups and individuals, and a number of services such as electronic newspapers, telepurchases, voting etc.

Many of the more sophisticated uses of relinking and computers are only applied in a few restricted experiments in some parts of the world. As far as the TRU Committee can judge CATV has in most countries not progressed further than the first generation. Canada and the U. S. and a few European countries have started to move into the second generation. Japan is experimenting most with the third generation but has not yet reached the second generation on any regular basis. Compared with the situation foreseen in the prognoses of the Sixties, development has progressed slowly.

The Committee has had two reasons for wishing to provide a fragmentary description of international development. One is to show how difficult it is to draw up national prognoses on the basis of a varying and complex international situation. Every country's chances of controlling the emergence of wide wave communications by legal, technological and economic means are considerably greater than in the case of videograms for example. The other reason is in order to give perspective to the Kabelvision Kiruna experiment. Under the terms of the nomenclature used here, Kabelvision Kiruna could be said to be an experiment – albeit on a very small scale – in second generation CATV.

5.2 CATV in Sweden

In Sweden not much attention has been paid to the question of CATV. The 1966 Radio Act also included wirebound distribution in SR's exclusive broadcasting rights, and this provided time in which to determine what policy would be desirable. The only regular CATV company in Sweden is one which works on a commercial basis in Malmö in a block called Kronprinsen. But, like the exception it is, it is viewed more as being a curiosity rather than something to take seriously. Harry Schein's "Inför en ny mediapolitik" (In the face of a new media policy) (1972) did not attract much discussion. The only really audible answer came from Paul Lindblom, whose "Politik för massmedier" (Policy for mass media) (1975) criticizes Schein's "undertone throughout his book to the effect that the development of CATV is practically controlled by Fate". Lindblom also claims that a full development of CATV in Sweden would because of the large costs involved, prevent important efforts being made in other fields. "And nobody has succeeded in proving that we would gain anything important and necessary in return for these investments and operating costs".

There is another book dealing with CATV, "Inflytande på en tråd" (Influence on a wire) (1973). One article in it was written by Ivar Ivre and Olof Hultén, both employed by the Swedish Broadcasting Corporation. They are sceptical about the surplus that CATV would bring about

and also state that there is no "reason to believe that mediumwise poor television or perhaps totally unprocessed information in the form of direct broadcasts from local government offices would in the long run attract any people other than specially motivated persons".

"Inflytande på en tråd" also contains an article by Gunnar Nelker who believes that the new technology could be utilized to activate the popular movements which in his opinion are in a situation of crisis.

Municipal interest, surveys and other activities

In some Swedish municipalities CATV has attracted interest. A proposal was put before the local authorities in Täby regarding the introduction of a similar scheme to that operated in Kiruna, where local programmes could be produced and transmitted via an existing cabel network to 2400 apartments. Solna did not get the local TV it wished for. However, local government meetings are broadcast to the library. The local district council commission in Eskilstuna has appointed the information committee "to keep itself informed on developments and at a suitable time present proposals regarding possible experimental work".

A unique CATV project is being conducted in Skönstaholm in Stockholm. In a housing area comprising 150 apartments, TV programmes are being produced in a cellar and are transmitted via the communal central aerial network. Apart from locally produced programmes about parties, children's gymnastics, regulations etc., the network also broadcasts borrowed films for children and programmes on e. g. gardening. The CATV network is run by the "neighbours' club" that has long existed in the area. Those who watch the programmes are members of the club and therefore they do not feel that they are violating the broadcasting regulations. SR and the National Swedish Telecommunications Administration, however, have submitted the case for prosecution since they consider the project is in violation of the Radio Act. The TV Committee of the Council of Scandinavian Ministers discusses CATV in its final report entitled "TV över gränserna" (Cross-border TV). The Committee has estimated the number of central antenna facilities. It is estimated that there circa 40,000 facilities covering less than 1000 apartments. As in a survey conducted by TRU, the Committee estimates that there are somewhat more than 40 central areial systems with more than 1000 subscribers. In the autumn of 1972 circa 44 % of about 2.7 million households with TV were linked to a central antenna system. The extension of local CATV networks in an area of circa 10,000 households (approximately the size of Kiruna) would cost an estimated Skr 2 million to Skr 8 million depending on how complicated it was. The TV Committee finally emphasizes that "should a decision be reached to develop CATV in Sweden in order to meet demands for e. g. local TV broadcasts, the possibilities of directly broadcasting TV and radio programmes from neighbouring Scandinavian countries should be accorded attention".

Apart from the TRU Committee, three commissions, the Radio

Commission, the Press Commission, and the Commission on Mass Media, have CATV as a secondary task.

The National Swedish Telecommunications Administration has conducted an internal investigation into costs, schedules and resource requirements in the event of CATV being developed in Sweden. Assessments were made on the basis of two sample locations, Västerås and Leksand. Four alternatives are catered for, of which the cheapest involves a oneway network room for between 17 and 25 channels. The intermediate alternatives cater for twoway systems while the most expensive one is for a twoway system where the subscribers are given terminal equipment so that they can answer questions, order tickets and goods and receive Pay TV programmes.

An extension of CATV throughout the country would according to the cheapest alternative cost Skr 8 billion and Skr 2600:– per household, and according to the most expensive alternative Skr 15 billion and Skr 4900:– per household. In the event of a fully developed CATV network throughout the country, circa 10,000 employees would be required according to estimates. Obviously this is a very uncertain estimate since it refers i. a. to the situation a good bit into the 21st century. If development were spread over a 30 year period, 60 % of Swedish households would be linked ten years after development commenced. The National Swedish Telecommunications Administration's survey emphasizes that for economic reasons development should initially be carried out in major urban areas. This would bring the costs down considerably. A previous cost estimate by the NSTA estimates the costs for an 80 % development, i. e. circa 1800 urban areas and 2.5 million households, at Skr 3.6 billion.

According to information received by the TRU Committee, the Board of Technical Development (STU) in conjunction with the Expert Group on Regional Development (ERU) is planning a pre-study in order to define the scope and targeting of regional experimental work involving telecommunications. The preliminary idea is to conduct the experiment at organizational and household level. Computer-based education, municipal services, information on social welfare, local library services, and consumer information are some of the components the experiment is planned to cover. By March 1975 no decision had yet been reached regarding implementation of the pre-study.

In order to render a description of the CATV situation in Sweden complete, the Committee wishes finally to draw attention to two statements made with regard to the development of CATV in Sweden. One was by the City Commissioners' Drafting Committee in Kalmar which informed the Minister of Finance and the Minister of Industry that "should a decision be reached to develop CATV activities in Sweden, the municipality of Kalmar is highly interested in product development units, administrative units and units manufacturing relays, amplifiers etc. for this purpose, being based in Kalmar". The second statement was made by the chairman of the telecommunications section of the Union of Civil Services Employees (Statsanställd no. 3, 1975), who stated that

the National Swedish Telecommunications Administration should be entrusted with the development of the CATW network and that development is an urgent matter i. a. because otherwise the medium might fall into the hands of private individuals.

The TRU Committee has elected to describe the situation rather than provide a prognosis regarding the future development of the CATV situation in Sweden. The description shows that views regarding the value of future CATV activities vary considerably. There are tendencies towards growing interest both in increased knowledge and in various kinds of activity in the field of CATV. Knowledge is as yet insufficient to provide a basis for a government decision on the question of a development of CATV in Sweden.

Here the Committee has presented the Kiruna results which indicate that CATV may have interesting development possibilities. In view of this the Committee feels that it would be interesting if any experiment that was more extensive as regards time, area and content were to be conducted inter alia on the basis of the experience gained in Kiruna.

Göteborgs Offsettryckeri AB, Stockholm 1975